

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A method for producing a light-emitting device comprising:

a step of electrically connecting a first electrode provided on a light-emitting layer of a light-emitting element, wherein said light-emitting layer is provided on one of the main surface of a semiconductor substrate (~~element-substrate~~), and a first lead of a lead frame, so ~~as to oppose each other~~ that the first electrode is opposite to an element mounting part of the first lead;

a step of electrically connecting a second electrode provided on the rear surface of a surface provided with the light-emitting layer of said element substrate, and a second lead of said lead frame;

~~a step of encapsulating a connecting part of said first electrode and said first lead, and said second electrode, and an electrode part of the second lead, with a translucent resin; and~~

~~a step of producing a discrete piece by cutting said first lead and the second lead from said lead frame;~~

a step of forming a film of joining material made of an alloy or a single metal on the first electrode of said light-emitting element, in advance of the step of electrically connecting the first electrode and said first lead; and

~~characterized in that a film of joining material (joining material film) made of an alloy or a single metal, is formed on the first electrode of said light-emitting element, and~~

a step of forming a pattern to reduce spreading of said joining material is formed on an~~the~~ element mounting part of said first lead, in advance of the step of electrically connecting the first electrode of said light-emitting element and said first lead,

wherein the step of electrically connecting the first electrode and the first lead, the film of joining material is contacted with the element mounting part under conditions that a temperature of the element mounting part has been raised to not lower than a melting point of the film of joining material, and that a temperature of the light-emitting element

is kept at not higher than melting point of the film of joining material.

2. (Canceled)
3. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein said film of joining material film is formed ~~in advance~~ by plating.
4. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein said film of joining material film is made ~~in advance~~ by forming joining material molded in a thin film shape on said first electrode.
5. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein in cases where said light-emitting device is mounted on a printed circuit board by a solder joint material, said film of joining material film is formed ~~in advance~~ by a joining material having a melting point higher than a melting point of a joining solder joint material used in surface mounting said light emitting device.
6. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein said film of joining material film is formed ~~in advance~~ by a gold-tin alloy.
7. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein a thickness of a light-emitting layer of said light-emitting element is sufficiently smaller compared with thickness of said ~~element~~ semiconductor substrate.
8. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein said pattern of said lead frame consists of a pattern with a plurality of grooves crossing mutually inside a joining area on the element

mounting part wherein the first electrode of said light-emitting element is placed.

9. (Currently amended) The method for producing the light-emitting device according to claim 8, ~~characterized in that~~ wherein said plurality of grooves extend outside said joining area, or crossing with other grooves extending outside said joining area.
10. (Currently amended) The method for producing the light-emitting device according to claim 1, ~~characterized in that~~ wherein said pattern of said lead frame consists of a pattern provided with a plurality of insular convex portions in a concave portion, the entire periphery of or a part of the periphery thereof being located outside said joining area.
11. (Currently amended) The method for producing the light-emitting device according to claim 10, ~~characterized in that~~ wherein the upper surfaces of said insular convex portions are flat.
12. (Currently amended) The method for producing the light-emitting device according to claim 8, ~~characterized in that~~ wherein a depth of said grooves or a height of said convex portions is larger than thickness of the joining material film formed on the first electrode of said light-emitting element.
13. (Withdrawn) A light-emitting device comprising:
 - a first electrode provided on one main surface of a semiconductor substrate through a light-emitting layer;
 - a light-emitting element provided with a second electrode on the rear surface of a surface provided with said light-emitting layer;
 - an element mounting part opposing to the first electrode of said light-emitting element; and
 - a translucent resin encapsulating a first lead electrically connected to said first electrode, a second lead electrically connected to a second electrode of said light-emitting element, and a surrounding of said light-emitting element;characterized in that the first electrode of said light-emitting element, and the

element mounting part of said first lead, are electrically connected by a joining material made of an alloy or a single metal.

14. (Withdrawn) The light-emitting device according to Claim 13, characterized in that a plurality of grooves crossing in a joining area wherein the first electrode of said light-emitting element is placed, are provided on the element mounting surface of the element mounting part of said first lead.
15. (Withdrawn) The light-emitting device according to Claim 14, characterized in that said plurality of grooves extend up to outside said joining area, or crossing with other grooves extending up to outside said joining area.
16. (Withdrawn) The light-emitting device according to Claim 13, characterized in that a concave portion, having a plurality of insular convex portions, is provided on the element mounting surface of the element mounting part of said first lead, and that the entire periphery or a part of the periphery of said concave portion is located outside said joining area.
17. (Canceled)
18. (Withdrawn) The light-emitting device according to Claim 13, characterized in that said joining material is made of a gold-tin alloy.
19. (New) The method for producing the light-emitting device according to claim 1, wherein in the step of forming the pattern to reduce spreading of said joining material, said pattern is formed on a surface of the element mounting part on which the light-emitting device is placed.